Item # 53

SEMINOLE COUNTY GOVERNMENT
AGENDA MEMORANDUM

SUBJECT: **WATER SUPPLY FACILITIES WORK PLAN**

DEPARTMENT: Planning & Development **DIVISION:**

AUTHORIZED BY: Donald S. Fisher **CONTACT:** Dick Boyer **EXT.** 7382

Agenda Date 02/24/2004 **Regular** ☐ **Consent** ☐ **Work Session** ☐ **Briefing** ☐
Public Hearing – 1:30 ☒ **Public Hearing – 7:00** ☐

MOTION/RECOMMENDATION:

1. Transmit the proposed amendments to the Capital Improvements, Conservation, Intergovernmental and Potable Water Elements.
2. Deny the proposed amendments.
3. Move to continue this item to (*date certain specified*).

District: County-wide — Dick Boyer, Senior Planner

BACKGROUND:

In 2002, the Legislature expanded the local government comprehensive plan (Plan) requirements to strengthen coordination of water supply planning and local land use planning. This was done in response to concerns that the limits of groundwater are being approached in many areas of the State and that alternative supplies must be identified, quantified and developed in addition to the implementation of local water conservation strategies and FDEP permitted water reuse programs.

The most significant requirement is completion of a 10-year Water Supply Facilities Work Plan (Work Plan) by all counties and cities within a "priority water resource caution area". These are areas where existing and reasonably anticipated sources of water and conservation efforts may not be adequate to 1) supply water for all existing legal uses and reasonably anticipated future needs and 2) sustain the water resources and related natural systems. This must be accomplished by Jan 1, 2005.

The local government's work plan must project water demand for at least a 10-year period and identify the current and planned water supply facilities and source(s) of water that will meet the projected demand. The Work Plan must be adopted as part of the Potable Water Element. The Capital Improvements Element must also be amended to include projects listed in the first five years of the ten-year Work Plan as well as the text of other Plan elements as appropriate. (See **Attachment A:** Legislative Requirements.)

Reviewed by:
Co Atty: KTC
DFS:
OTHER:
DCM:
CM:
File No. ph130pdp02

Overview of County Approach to the Work Plan:

1. Seminole County Potable Water Service Areas:
    a. The County is proposing a conservative Work Plan to meet the projected water demand over the next ten years for the four major County service areas. The main components of the Work Plan revolve around the following four basic areas (a more detailed water supply strategy can be found within the Work Plan's Executive Summary, Section E – "County Service Area Water Supply Strategy"):
        i. Development and optimization of groundwater supplies
        ii. Expansion of reclaimed water systems
        iii. Water conservation program including conservation rate structure
        iv. Evaluation of alternative water sources
    b. On a priority basis, the County will continue to invest and expand in the existing reuse system and water conservation program. The Water Plan recommends proceeding with the initial phase of the residential reclaimed water retrofit program and continuing the planning related to alternative water supply development. Only after evaluation of the impact on consumption of the recommended reclaim/retrofit Phase 1 program and of the recommended Land Development Code changes and water conservation initiatives will additional expansion of residential reclaim/retrofit be considered.Moreover, the success of these programs will predicate the timing for constructing treatment facilities for brackish water and/or surface water from the St Johns River to meet future water demands.
    c. As part of creating the Work Plan, the County will work with the St. Johns River Water Management District (District) to ensure the Regional Water Supply Plan (RWSP) is considered. The RWSP details the District's studies of water supply opportunities available to local communities to reduce their dependence on local groundwater. (See **Attachment B**: Overview of Regional Supply Plans.)
    d. Discussions with the District regarding potential water supply sources, the amounts of water available to be permitted from these sources, coordination with other water suppliers and support funding for capital projects will be ongoing throughout the amendment process. Discussions will continue year-to-year as improved water supply information becomes available, projections are updated and technologies to produce and conserve water are improved.
2. City Water Supplied to Unincorporated Users:

    Several cities within Seminole County supply water to unincorporated residents in two ways; 1) through water purchased wholesale from the city (by the County) for retail distribution by the County and/or 2) directly by the city to unincorporated residents who are water customers of the city. The cities will address their

continued ability to provide this service through their own Work Plans, due to be adopted by January 1, 2005.

The proposed amendments are directed at meeting the 2002 legislative requirements for long range water supply planning. The County will seek to address other inter-jurisdictional issues such as service area boundaries and the cost of service through the Planning Technical Advisory Committee (PTAC), the Mayors and Manager's Subcommittee and interlocal agreements as appropriate.

3. Private Utility Water Supplied to Unincorporated Users:

   There are two major private utilities operating within Seminole County. The first is Florida Water Services which operates nine unincorporated service areas including that of Chuluota. The second is Utilities Incorporated of Florida which operates ten unincorporated service areas including the Sanlando service area. While not specifically asked by the legislation to produce a work plan, each of these entities has been asked to provide documentation that they also have planned sufficiently for the future and are asked to forward that information to the County for incorporation into the Work Plan.

4. Other Suppliers of Water to Unincorporated Users:

   The smallest water suppliers to unincorporated residents are those for mobile home or recreational vehicle parks plus several water associations. Due to the relatively small amount of water used, the legislation required only the identification of these systems in the Work Plan.

Overview Of Proposed Amendments:

1. **Attachment C:** Proposed Amendments to the Potable Water Element (04S.TXT01.1)

   a. Attachment C.1 - Revision to Introduction – Addition of text noting the addition of these amendments to the Comprehensive Plan.

   b. Attachment C.2 - Revision to Issues and Concerns – Addition of text noting water supply as a major issue to be addressed by the Comprehensive Plan.

   c. Attachment C.3 - Addition of "Water Supply Facilities Work Plan" Section – Addition of text following the Goals, Objectives and Policies section describing the water supply strategy, projected demand, and the proposed ten-year capital projects plan. The Work Plan will be updated annually as necessary as part of the annual Capital Improvements Element update.

      Note: In the final Comprehensive Plan revision, the attached "Seminole County Water Service Areas" map and Tables 1, 2 and 3 will be placed in the Exhibits section of the Potable Water element. The first 5 years of Table 4 will annually be included in the Five Year CIE Update with the entire table available in the Water Supply Facilities Work Plan Support Document.

2. **Attachment D:** Proposed Amendment to the Capital Improvements Element (CIE): Update of Five Year Potable Water Capital Projects Listing (04S.TXT01.2) This amendment 1) will add to or revise the CIE with those potable water projects which fall within the first five years of the ten-year Work Plan and 2) is required to maintain the internal consistency of the Comprehensive Plan between elements. Each project must have identified a financially feasible revenue source. Only those projects associated with the Work Plan are presented.
3. **Attachment E:** Proposed New Policy Amendments to Other Elements of the Comprehensive Plan (04S.TXT01.3) - These amendments are required by the legislation to ensure that the District's RWSP is considered and coordinated with by the County and that a ten-year planning period is maintained year-to-year.

Overview Of Support Document:

Water Supply Facilities Work Plan Support Document to the Potable Water Element – This standalone document contains the Work Plan as the Executive Summary plus all supporting data and analysis. The Support Document will be updated with any new or revised city data following the submission deadline of January 1, 2005. Annually, changes to the Work Plan will be identified and adopted as part of the Potable Water Element, at the same time the CIE is updated. (Note: As with other support documents to the Comprehensive Plan, this item is submitted directly to the reviewing agencies along with the proposed amendments and is not part of the agenda package.)

Economic Impact Statement: See **Attachment F.**

Staff Summary: The 2002 legislation requires that comprehensive plans be amended to address a jurisdiction's projected ten-year demand for water. The proposed amendments institute a water supply Work Plan consisting of capital projects and permitted water supplies that will address that demand as presently projected. The Work Plan will be subject to annual review and revision as necessary by the County. In the future, updates to the Work Plan will normally be part of the annual comprehensive plan update of the CIE's five-year capital projects list to include an additional five-year project list for potable water projects noted in the Work Plan.

Staff Recommendation: Staff recommends adoption of the amendments.

BOARD ACTIONS:

Jan 07, 2004	LPA briefing
Feb 04, 2004	LPA hearing (to be completed)
Feb 24, 2004	BCC transmittal hearing (scheduled)
Jun 08, 2004	BCC adoption hearing (scheduled)

ATTACHMENTS

A Legislative Requirements

B Overview of Regional Water Supply Plans

C Proposed Amendments to the Potable Water Element:
- Attachment C.1 - Revision to Introduction
- Attachment C.2 - Revision to Issues and Concerns
- Attachment C.3 - Addition of "Water Supply Facilities Work Plan" Section (*NOTE: This section to be completed for 02/04 hearing).*

D Proposed Amendment to the Capital Improvements Element: Update of Five Year Potable Water Capital Projects Listing (*NOTE: This section to be completed for 02/04 hearing).*

E Proposed New Policy Amendments to Various Elements of the Comprehensive Plan

F Economic Impact Statement

ATTACHMENT A

Legislative Requirements

The 2002 Legislature expanded the local government comprehensive plan (Plan) requirements to strengthen coordination of water supply planning and local land use planning. One of the most significant new requirements is a 10-year Water Supply Facilities Work Plan.

The work plan must project the local government's needs for at least a 10-year period, identify and prioritize the water supply facilities and source(s) of water that will be needed to meet those needs, and include in the local government's Five-Year Schedule of Capital Improvements the capital improvements identified as needed for the first five years.

Each listed capital improvement included in the Five-Year Schedule must identify a financially feasible revenue source, not one that is speculative or contingent. Each year during the annual update to the Five-Year Schedule, a new fifth year will be added, and capital improvements identified in the 10-year work plan will be incorporated into the Five-Year Schedule.

Listed below is a summary of the new Plan amendment and Evaluation and Appraisal Report (EAR) requirements. Each summary describes the reason for the proposed amendments to the Plan.

1. Coordinate all aspects of their comprehensive plan with the appropriate water management district's regional water supply plan (see s.163.3177(4)(a), F.S.).
2. Revise the Potable Water sub-element considering the appropriate water management district's regional water supply plan (s.163.3177(6)(c), F.S.).
3. Revise the Potable Water sub-element to include a Water Supply Facilities Work Plan for at least a 10-year planning period addressing facilities for which the local government is responsible (s.163.3177(6)(c), F.S.).
4. Revise the Conservation Element to ensure that projected water needs and sources are for at least a 10-year planning period and that full consideration is given to the appropriate regional water supply plan or, in the absence of an approved regional water supply plan, the district water management plan (s.163.3177(6)(d), F.S.).
5. Revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with the applicable regional water supply plan (s.163.3177(6)(h)1., F.S.).
6. Consider, during preparation of the Evaluation and Appraisal Report, the appropriate regional water supply plan (s.163.3191(2)(l), F.S.).
7. Consider, during preparation of the Evaluation and Appraisal Report, the need to revise the Potable Water Sub-element to include the Water Supply Facilities Work Plan (s.163.3191(2)(l), F.S.).

ATTACHMENT B

Overview Of Regional Water Supply Plans

In anticipation of the rapid population growth and increasing water demands facing the state and the potential threats to both the economy and natural resources, the Legislature amended the Florida Water Resources Act (Chapter 373, F.S.) in 1997. The amendments required the five water management districts to initiate regional water supply planning in all areas of the state where reasonable anticipated sources of water were deemed inadequate to meet year 2020 projected demands. Four of the Districts were required to complete regional water supply plans: Northwest Florida, Southwest Florida, St. Johns River, and South Florida.

A RWSP includes a projection of water demands and an identification of potential sources of water to meet these demands. The RWSP looks forward in time for 20 years and is intended to provide the framework for future water supply decisions in the areas where it has been determined that traditional sources of water are not adequate to provide for future needs while sustaining the water resources and related natural systems. Within these areas existing and reasonably anticipated sources of water and conservation efforts may not be adequate to (1) supply water for all existing legal users and reasonably anticipated future needs and (2) to sustain the water resources and related natural systems.

The RWSP identifies potential water supply source options for water supply development, including traditional and alternative sources that will exceed the needs projected by the district. The RWSP also estimates the associated costs for developing these sources. Sources include (1) new well fields, (2) increased use of reclaimed water, (3) storage reservoirs, (4) surface water withdrawals, (5) aquifer storage and recovery, (6) reverse osmosis/desalination and (7) conservation. The water source options identified in the RWSP represent a "menu" of possible options for water supply development from which local governments, government-owned and privately owned utilities, self-suppliers and others may choose. The options are provided as reasonable concepts that water users in the region can pursue in their water supply planning. Water users may want to select a water supply option as presented in the plan or combine elements of different options that better suit their water supply needs. Additionally, the plan provides information to assist water users in developing funding strategies to construct water supply development projects.

The goal of the RWSP is to identify sufficient sources of water within the planning region to meet projected water demands. Prior to future development of any water supply option, it will be necessary to meet the conditions for issuance of and obtain all applicable permits. Following a decision to pursue any option identified in the RWSP, it will be necessary for the interested party(ies) to conduct more detailed engineering, hydrologic, economic and biological assessments to provide the necessary technical support for developing the option. Each RWSP is updated every five years.

ATTACHMENT C

Proposed Amendments to the Potable Water Element:

- **Attachment C.1 - Revision to Introduction**
- **Attachment C.2 - Revision to Issues and Concerns**
- **Attachment C.3 - Addition of "Water Supply Facilities Work Plan" Section**

ATTACHMENT C.1: Revision to Introduction

The main source of potable water in Seminole County is from the Floridan Aquifer. ~~Potable water is pumped from the ground, treated and distributed to residential and non-residential unincorporated Seminole County users through County, city and private water systems.~~ The County provides potable water service from the Floridan Aquifer to four major service areas in the unincorporated area:~~currently owns and operates nine water treatment plants in three service areas:~~

A Southwest Service Area - Served by the Lynwood plant;

B Southeast Service Area - Served by the ~~Consumers~~SE Regional (formerly Consumers), Indian Hills, and Lake Hayes plants; ~~and~~

C Northwest Service Area - Served by the Heathrow, Hanover Woods, Markam, and Lake Monroe, and~~,~~

D Northeast Service Area – Served by the Country Club and Greenwood Lakes plants.

Additional potable water service is provided to unincorporated users by the cities of Altamonte Springs, Casselberry, Lake Mary, Oviedo and Sanford, and by two major private water utilities~~.~~, Florida Water Services and Utilities Incorporated of Florida.

The County operates the potable water system as a fee-based enterprise. To ensure a continued supply of water, the Water and Wastewater Division of the County's Environmental Services Department does an annual budget and five-year capital plan for maintenance, replacement and capacity expansion based on a five year master plan. Additionally, the County works with the cities and private utilities to share wholesale service and works with the St Johns River Water Management District regarding the long term projected growth of demand for water services in Seminole County.

In 2002, the Florida Legislature added additional requirements for the long term planning and coordination of the use of available water supplies. These requirements were added to the Potable Water Element in 2004 and are more fully discussed in the Issues and Concerns section and the Water Supply Facilities Work Plan section of this Element.

~~In the past decade,~~Since the early 1990's, public health and safety has been furthered by the expansion of the water fluoridation program and the adoption of a cross-connection control (backflow prevention) ordinance to reduce the chance of water contamination within the distribution system. Additionally, the Public Safety Department operates an underground fuel storage tank replacement program to reduce the possibility of ground water supply contamination.

ATTACHMENT C.2: Revision to Issues and Concerns

Issue POT 6 ~~Future Water Supply~~

~~During 2000 and 2001, the St Johns River Water Management District (District) has worked to identify the water needs of the District through the year 2020. The results indicate the potential need for new regional facilities, new water storage methods and a much stricter consumptive use permitting for new and existing wells. The County will continue to be fully engaged in the regional process of addressing and resolving these issues.~~

Water Supply Facilities Work Plan

The 2002 Florida Legislature added requirements that the Potable Water Element of the Comprehensive Plan include a ten-year capital projects listing and be supported by a Water Supply Facilities Work Plan (Work Plan). This Work Plan is to address maximizing water conservation and water resuse strategies and is to identify and plan for needed alternative water supply sources.

It is a requirement that the Work Plan be adopted no later than January 1, 2005 and that it consider the Regional Water Supply Plan of the St. Johns River Water Management District. A description of the Work Plan water supply strategy and capital facilities project schedule, to be updated annually as necessary, can be found following the Goals, Objectives and Policies section of this Element.

ATTACHMENT C.3: Water Supply Facilities Work Plan – Executive Summary

Seminole County
Water Supply Facilities Work Plan
Executive Summary

A BACKGROUND

In 2002, the Legislature expanded the local government comprehensive plan (Plan) requirements to strengthen coordination of water supply planning and local land use planning. This was done in response to concerns that the limits of groundwater are being approached in many areas of the State and that alternative water supplies must be identified, quantified and developed in addition to the implementation of local water conservation strategies and FDEP permitted water reuse programs.

The most significant requirement is completion of a 10-year Water Supply Facilities Work Plan (Work Plan) by all counties and cities within a "priority water resource caution area". These are areas where existing and reasonably anticipated sources of water and conservation efforts may not be adequate to 1) supply water for all existing legal uses and reasonably anticipated future needs and 2) sustain the water resources and related natural systems. The deadline to have the Work Plan completed is January 1, 2005.

The local government's Work Plan must project water demand for at least a 10-year period. The Work Plan will demonstrate that the current and planned water supply facilities and source(s) of water will meet the projected demand. The Work Plan must be adopted as part of the Potable Water Element. The Capital Improvements Element must also be amended to include projects listed in the first five years of the ten-year Work Plan as well as the text of other Plan elements as appropriate. The Work Plan must be approved by the Department of Community Affairs (DCA) and St. Johns River Water Management District (SJRWMD).

Seminole County (County) has prepared this Work Plan to meet the criteria set forth by the Legislature. The Work Plan addresses supply and demand for County service areas and includes an evaluation of non-County water suppliers to the unincorporated area through year 2015 which is an eleven year planning period. The Work Plan will be updated on an annual basis.

B OVERVIEW

The County Work Plan incorporates and continues the progressive plan that the County has been implementing over the past 10 years. The County's plan has been based on seeking economical and environmentally sound solutions for water supply. The main components of the Work Plan revolve around the following four basic areas:

- Development and optimization of groundwater supplies
- Expansion of reclaimed water systems
- Water conservation program including conservation rate structure
- Evaluation of alternative water sources

The County strategy for water supply is discussed in more detail below.

C CONSIDERATION OF REGIONAL WATER SUPPLY PLAN

The County has communicated with the SJRWMD with regards to the relevant aspects of the Regional Water Supply Plan (RWSP) that should be included in the Water Plan. The District's RWSP was a main consideration in compiling the Work Plan. Relevant items of discussion were demand projections, appropriate water sources to meet projected water demand, use of reuse strategies, and use of water conservation strategies. The County has partnered with SJRWMD and other local utilities in evaluations of alternative water supplies and use of lower quality water sources.

D OVERVIEW OF POTABLE WATER SUPPLIERS IN SEMINOLE COUNTY

Seminole County (County) is located in Central Florida. A service area map (Map 1) is attached which identifies the potable water service areas in the County. Within the unincorporated area of Seminole County, potable water is supplied to customers by the Seminole County Environmental Services Department (SCES), by several City utilities, private utilities and self-supply water suppliers. The remaining unincorporated residents obtain water from private wells.

Seminole County Utilities Water Supply (SCES)

SCES's potable water system is divided into four geographical service areas: Northeast, Northwest, Southeast and Southwest. The Northeast Service Area (NESA) and Northwest Service Area (NWSA) are two distinct, adjacent service areas. The County is currently working on constructing a potable water interconnect between the NESA and NWSA that will allow the transfer of water between both service areas as necessary. The other two service areas, Southeast (SESA) and Southwest (SWSA) are geographically separated from each other and the other service areas.

Within the four service areas, the County's existing water system is comprised of raw water wells and pumps, ten water treatment plants (WTPs), ground storage tanks, booster pump stations and water mains. Water is supplied to the County's WTPs via raw water wells which tap groundwater from the Floridan Aquifer.

Table 1 identifies and quantifies the County's water supply needs and sources from year 2001 through year 2015. The table presents the total projected water demand, which is based on historical patterns, versus the projected groundwater source in order to determine the groundwater supply surplus or deficit in the County. In year 2003, the County provided an average of 15.34 million gallons per day (mgd) to its customers. All of the groundwater deficits in the County's system are currently projected to occur in the Northwest Service Area.

Northeast Service Area (NESA)

The Northeast Service Area (NESA) is supplied by the Country Club WTP and the Greenwood Lakes WTP. The NESA has a small projected population growth rate and is approaching buildout. There is a need for additional well and pumping capacity as well as additional storage to meet the projected demands. The NESA Consumptive Use Permit (CUP), issued by the SJRWMD, expired on November 30, 2003. Prior to expiration, the County submitted a CUP renewal application and is currently in the renewal process. The County provided an average of 1.976 mgd to the NESA in year 2003.

Northwest Service Area (NWSA)

The Northwest Service Area (NWSA) is supplied by the Heathrow WTP, Hanover Woods WTP, Lake Monroe WTP and Markham Regional WTP. The NWSA is the most affluent region of the County and is characterized as a high growth area with high per capita water use. The residential community features large homes on large, lushly landscaped lots. As previously mentioned, the NWSA is where projected future demand exceeds the current CUP allocation of groundwater. Approximately 4.68 mgd ADF was supplied to the NWSA customers in year 2003.

The NWSA CUP was renewed in March 2003 and expires in March 2010. The high per capita water use in the NWSA has resulted in conditions of the CUP renewal that will require the County to either replace a portion of the current or projected potable water demand with a lower quality water (such as reclaimed water) or restrict the growth. Implementation of effective water conservation measure is also expected to reduce the per capita water use. Alternative water supplies that produce potable water are not suitable to reduce per capita water use. It should be noted that conditions of the CUP renewal also require extensive monitoring of the groundwater withdrawals to quantify the amount of groundwater that may safely be withdrawn after March 2010.

Southeast Service Area (SESA)

The Southeast Service Area (SESA) is supplied by the Southeast Regional WTP, Indian Hills WTP and Lake Hayes WTP. The SESA is a high growth area similar to the NWSA, but it does not have the high per capita water use. The current groundwater supply and treatment facilities are sufficient to meet the demands through the year 2020 projections. The SESA CUP expired on December 31, 2003. Prior to expiration of the CUP, the County submitted the renewal application and is currently in the renewal process. The County provided an average of 7.83 mgd to the SESA in year 2003.

Southwest Service Area (SWSA)

The Southwest Service Area (SWSA) is supplied by the Lynwood WTP. The SWSA is a low growth area. The current groundwater supply and treatment facility is sufficient to meet the demands through the year 2020 projections. The SWSA CUP allocation is adequate through year 2020. The CUP expires in September 2021. The County provided an average of 1.17 mgd to the SWSA in year 2003.

City, Private and Self-Supply Water Suppliers

City Utilities

There are seven (7) municipalities within Seminole County, each providing potable water service to city residents. Based on the 2002 Legislation, each of the cities is required to complete and adopt a Water Supply Facilities Work Plan by January 1, 2005, the same time schedule as the County.

All the cities provide water service to some residents in unincorporated areas of the County. In November of 2003 each city utility director and planning director was mailed a request for information regarding CUPs, facility capacity and projected water demand plus service area and utility maps. At this time, five cities have responded with data and two have indicated their intent to provide data. What information has been sent in at this

time will be included in the Support Document with the remaining information entered as each city completes and adopts its own Work Plan by January 1, 2005.

Five of the seven cities supply potable water to unincorporated residents through:

1) Wholesale water sales to the County from the city for retail distribution by the County to unincorporated residents and/or
2) Direct distribution by the city to unincorporated residents who are water customers of the city.

In general, the wholesale amounts of water sold to the County or supplied to unincorporated residents by a city are a small fraction of the city's overall water demand and should be easily incorporated into each city's overall water Work Plan. The County will monitor completion of each city plan to assess whether service to the unincorporated area has been included and will update its own Work Plan with the information.

The full information received from each city is contained in the Support Document.

Private Utilities

There are two major private utilities operating within Seminole County. The first is Florida Water Services (FWS) which operates nine unincorporated service areas including that of Chuluota. The second is Utilities Incorporated of Florida (UI) which operates ten unincorporated service areas including the Sanlando service area. While not specifically asked by the legislation to produce a Work Plan, each of these entities has been asked to provide documentation that they also have planned sufficiently for the future and were asked to forward that information to the County for incorporation into the Work Plan.

At this time, FWS has responded to the information request. Of their nine service areas, only two – Apple Valley and Chuluota – have the possibility for any significant growth, the others being small, built-out service areas. FWS has indicated that growth demands will be met with requests for increased permitted capacity. FWS is actively seeking buyers.

UI has not responded at this time. Of the ten service areas, only one – Sanlando northwest of Altamonte Springs – is likely to have any significant growth. The other service areas being small are built-out service areas. Previous data collected indicates that facility capacity should be sufficient for any growth however CUP permitted capacity is unknown. The County will continue to work with UI and SJRWMD to obtain the information needed over the course of this amendment process.

The full information received from each private utility is contained in the Support Document.

Self-Supply Water Providers

Seminole County has historically identified eight (8) self-supply water providers to unincorporated residents. The smallest of the water suppliers include mobile home or recreational vehicle parks plus several water associations. Due to the relatively small amount of water used, the legislation requires only the identification of these systems in the Work Plan.

Because of their small impact and limited development potential, only a brief description of their activity is presented in the Support Document. Previously collected information

indicates a total facility capacity estimated at 1.865 mgd and a total demand of 0.633 mgd.

E COUNTY SERVICE AREA WATER SUPPLY STRATEGY

The County's approach to meeting the projected water demand over the next 10 years for the four major County service areas is by first optimizing the use of potable ground water, the most economical of the water sources, as well as protecting the County's natural resources. This strategy is based on the following basic diversifying principles:

1. Optimize the use of the existing groundwater resources in an environmentally effective manner. The NWSA groundwater monitoring program is an example of this principal.
2. Continue implementation of water conservation initiatives, especially in the NWSA. Evaluate effectiveness of measures and adjust if necessary.
3. Review and modify land development regulations to affect reduction in potable water use patterns.
4. Effect short-term reduction in per capita water use in the NWSA by both water conservation and replacing current potable water irrigation with lower quality water such as reclaimed water. The latter is proposed to be implemented by expansions to the reuse program including retrofitting reclaimed lines in key residential neighborhoods. Evaluate effectiveness of implemented retrofit projects to reduce potable water usage.
5. Require future development to provide facilities for lower quality water for irrigation.
6. Continue expansion of the reclaimed water systems for future development.
7. Participate in the local Tri-Party Agreement to provide an augmentation source for the reclaimed systems in the NWSA and NESA.
8. Continue evaluation and development of Alternative Water Supplies primarily in the NWSA.
9. Support regional water supply initiatives.
10. Seek funding assistance on reclaimed water and alternative water supply programs to reduce burden on customer base.
11. Seek ways to replace aquifer withdrawals by other users (such as golf courses) with lower quality irrigation water and receive regulatory credit on the CUP's.
12. Consider value of private irrigation wells. If appropriate, consider pilot project in suitable residential area.

On a priority basis, the County will continue to invest in the existing reuse system and water conservation program. The Water Plan recommends proceeding with the initial phase of the residential reclaimed water retrofit program and continuing the planning related to alternative water supply development.

Only after evaluation of the impact on consumption of the recommended reclaim/retrofit Phase 1 program and of the recommended Land Development Code and water conservation initiatives will additional expansion of residential reclaim/retrofit be considered.

Additionally, the success of these programs will predicate the timing for constructing treatment facilities for brackish water and or surface water from the St. Johns River to meet future water demands.

In order to develop capital projects to meet water demands for the next 10 years, certain projections and assumptions were required. These assumptions were made based on the best information available at this time. Because the County's water supply strategy is diversified, and there are many unknowns related to regulatory permitting of both current (groundwater) and future (brackish and surface water) sources; it will be necessary to review these assumptions on a regular basis in future Water Plan updates.

Table 2 identifies the projections of the potable water demands by service area. The table identifies the SJRWMD permitted allocation versus the current demand to determine the groundwater surplus or deficit in the service area. Additional water needs, projected to occur in approximately 2010, would be met with the use of alternative water supplies such as brackish groundwater and/or St. Johns River water treated through a specially built facility for this purpose.

Currently, the County is designing the first Phase of the residential retrofit program to offset potable water usage with reclaimed water. Also, a draft study was completed that identifies the alternative water recommendations in the NWSA for the long term potable water production. The County continues to examine the changes and needs of the NWSA to meet the regulatory constraints as well as serve the existing and future customers.

Summary of Ten-Year Capital Facility Projects

The guidelines for preparing the Work Plan require that the water supply capital facilities projects be included in the County Capital Improvement Projects (CIP). Accordingly, the current utilities CIP was reviewed and modifications were made to the 5-year plan to include facilities necessary to satisfy the Work Plan. Table 3, Proposed Water Supply Projects For Draft Work Plan – Description, and Table 4, Proposed Water Supply Projects For Draft Work Plan – By Year present pertinent County CIP as modified to include projects for a 5-year period starting with the FY2005 planning period, plus the additional 5 years to cover the full 10 years of the Work Plan. Table 3 identifies the Work Plan projects with description as well as funding source, total project cost and starting year. Table 4 identifies the Work Plan projects with project titles and cost per fiscal year for each project.

Capital projects related to reclaimed water and alternative water supply make up a substantial amount of the capital program. As previously noted, if partners are not developed for alternative water supply, the capital cost for that program would be reduced to cover only the County needs.

Discussions with the District regarding potential water supply sources, the amounts of water available to be permitted from these sources, coordination with other water suppliers and support funding for capital projects will be ongoing throughout the amendment process. Discussions will continue year-to-year as improved water supply

information becomes available, projections are updated and technologies to produce and conserve water are improved.

Water supply strategies for private utilities serving unincorporated areas of the County are contained in the Support Document.

F COMPREHENSIVE PLAN AMENDMENTS

This Work Plan is excerpted from the Water Supply Facilities Work Plan Support Document to the Potable Water Element of the County's Comprehensive Plan. The Support Document contains the Work Plan as the Executive Summary plus supporting data and analysis. The Support Document will be updated with new or revised city data following the submission deadline of January 1, 2005. Annually, the Potable Water Element and Capital Improvements Element will be amended to include any changes made to the Work Plan.

Additionally, the Capital Improvements, Conservation, Intergovernmental and Potable Water Elements have been amended to include policies required by the 2002 Legislation to insure the annual update of the ten-year Work Plan as necessary, the update of the Capital Improvements Element to maintain the internal consistency of the Comprehensive Plan and to insure that the District's Regional Plan is considered with each revision.

G EVALUATION AND APPRAISAL REPORT REVIEW

The County has addressed the corollary requirements for the Conservation and Intergovernmental Elements within the Support Document to the Water Plan by including an assessment of "current, as well as projected water needs and sources for at least a 10-year period, considering the appropriate regional water supply plan". Additionally, the County will consider the need to revise the Work Plan during the preparation of the next Evaluation and Appraisal Report.

EXHIBITS TO THE WORK PLAN

Map 1 – Seminole County Service Area Map

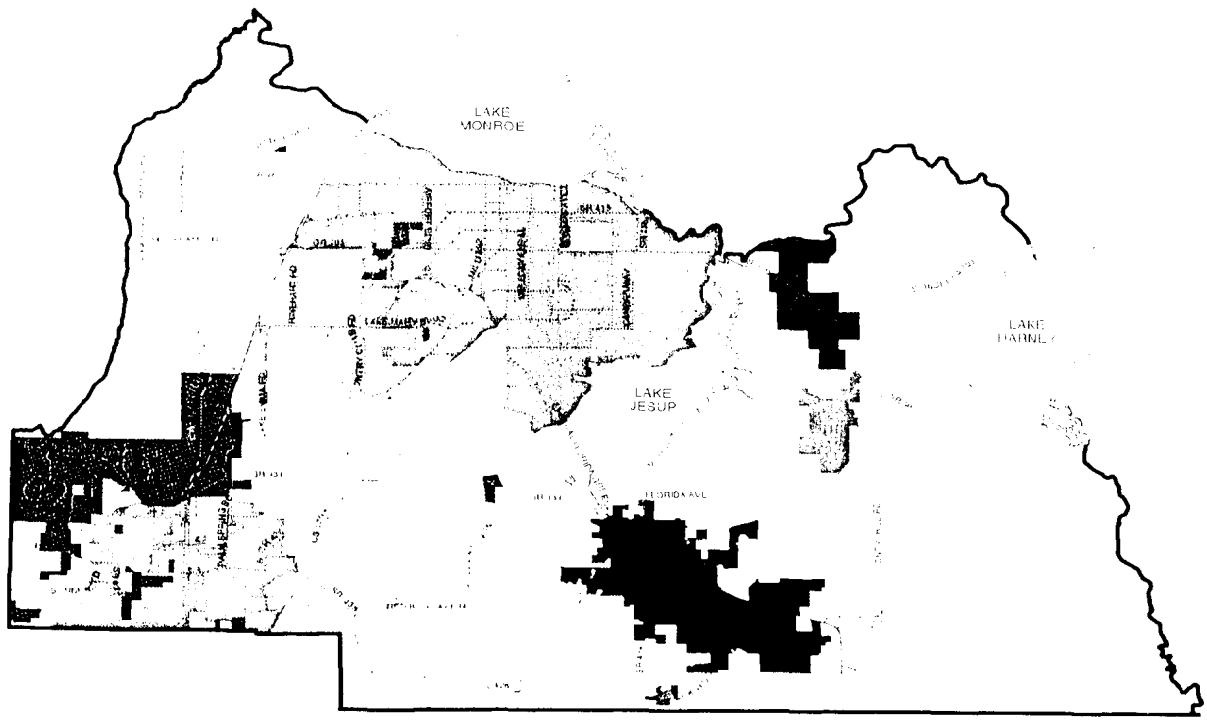
Table 1 – Projections of Service Area Demand and Capacity

Table 2 – Water Supply Needs and Sources

Table 3 – Proposed Capital Projects – Description

Table 4 – Proposed Capital Projects – By Year

Seminole County Water Service Areas



N

LEGEND

- CITY OF ALTAMONTE SPRINGS
- CITY OF CASSELBERRY
- CITY OF LAKE MARY
- CITY OF LONGWOOD
- CITY OF OVIEDO
- CITY OF SANFORD
- CITY OF WINTER SPRINGS
- FLORIDA WATER SERVICES
- LAKE HARNEY WATER ASSOC.
- MIDWAY CANAAN UTILITIES
- MULLET LAKE WATER ASSOC.
- PALM VALLEY ASSOC.
- SEMINOLE COUNTY UTILITIES
- SEMINOLE WOODS
- SPRING HAMMOCK
- TOWN & COUNTRY R.V. RESORT
- TUSKAWILLA TRAILS
- TWELVE OAKS CAMPGROUND
- UTILITIES INC.

Source: Seminole County Planning
CAPITAL IMPROVEMENTS
(ceis) - Wtserv.apr Last Saved: 1/30/01)

CE EXHIBIT 1

Table 1
Water Supply Needs and Sources
(Seminole County Service Areas)

Year	Total Projected Water Demand[a] (mgd)	Total Projected Supply Groundwater Sources[b] (mgd)	Total Projected Supply From Alternative Water Source[c] (mgd)	NW Service Area Alternative Water Sources		Conservation Program
				Reclaimed Water[d] (Yes or No)	CUP Sources (Brackish GW / Surface Water)[e] (Yes or No)	
2001	18.06	18.06	0	N	N	Y
2002	18.99	18.99	0	N	N	Y
2003	19.92	19.93	0	N	N	Y
2004	20.85	20.85	0	N	N	Y
2005	21.78	21.29	0.49	Y	N	Y
2006	22.65	21.91	0.74	Y	N	Y
2007	23.51	22.53	0.99	Y	N	Y
2008	24.38	23.14	1.23	Y	N	Y
2009	25.24	23.76	1.48	Y	N	Y
2010	26.11	24.38	1.73	Y	Y	Y
2011	26.69	24.65	2.04	Y	Y	Y
2012	27.27	24.92	2.35	Y	Y	Y
2013	27.84	25.18	2.66	Y	Y	Y
2014	28.42	25.45	2.97	Y	Y	Y
2015	29.00	25.72	3.28	Y	Y	Y

(a) Based on historic usage patterns. Reduction due to water conservation not accounted in the projected water demand.
(b) Groundwater sources for SE, SW and NE Service Areas is assumed as the source for Projected Water Demand. Groundwater source for NW Service Area is from CUP allocation.
(c) Total projected water demand less total projected groundwater sources. Note: All deficits occur in the NW SA.
(d) Reclaimed water sources are identified as the 75% of the available wastewater flow serving only customers that would have an offset of potable water.
(e) Alternate potable sources are sources other than groundwater that requires a CUP.

Assumptions:
(1) It is assumed that 1 mgd of reclaimed water will offset 0.75 mgd of potable water
(2) Reuse provided at a level to meet the CUP. Assumes reuse retrofit frozen at 2010 levels; however, some of the offset may occur from expansion other than retrofit.
(3) Assume that reuse availability limited to reuse generation in NWSA.

Table 2 - Projections of Service Area Potable Water Demands and Permitted Groundwater Capacity

Water Service Areas (mgd)	2003 Design Capacity (ADF) (1)	2003 Permit SJRWMD Alloc (2)	2003 Current Demand (ADF)	2003 Permit Surplus/ (Deficit)
N West (4)	8.196	5.790	4.678	**1.112**
N East (4)(5)	4.031	3.020	1.976	**1.044**
S East (6)	13.080	9.150	7.825	**1.325**
S West	2.560	1.480	1.167	**0.313**
TOTALS	27.867	19.440	15.646	
Blk Hmk (7)	0.175	NA	0.098	**0.077**

Water Service Areas (mgd)	2010 Design Capacity (ADF) (1)	2010 Permit SJRWMD Alloc (2)	2010 Projected Demand (3)	2010 Permit Surplus/ (Deficit)
N West (4)	11.258	8.230	9.960	**(1.730)**
N East (4)(5)	5.111	3.020	3.550	**(0.530)**
S East (6)	13.080	9.150	11.200	**(2.050)**
S West	2.560	1.480	1.400	**0.080**
TOTALS	32.009	21.880	26.110	
Blk Hmk (7)	0.175	NA	0.133	**0.042**

Water Service Areas (mgd)	2015 Design Capacity (ADF) (1)	2015 Permit SJRWMD Alloc (2)	2015 Projected Demand (3)	2015 Permit Surplus/ (Deficit)
N West (4)	11.258	8.230	11.510	**(3.280)**
N East (4)(5)	5.111	3.020	3.600	**(0.580)**
S East (6)	13.080	9.150	12.430	**(3.280)**
S West	2.560	1.480	1.460	**0.020**
TOTALS	32.009	21.880	29.000	
Blk Hmk (7)	0.175	NA	0.133	**0.042**

Water Service Areas (mgd)	2020 Design Capacity (ADF) (1)	2020 Permit SJRWMD Alloc (2)	2020 Projected Demand (3)	2020 Permit Surplus/ (Deficit)
N West (4)	11.258	8.230	11.720	**(3.490)**
N East (4)(5)	5.111	3.020	3.930	**(0.910)**
S East (6)	13.080	9.150	12.670	**(3.520)**
S West	2.560	1.480	1.460	**0.020**
TOTALS	32.009	21.880	29.780	
Blk Hmk (7)	0.175	NA	0.133	**0.042**

1 Physical plant permitted average day capacity.

2 Daily average pumping amount based on SJRWMD permit allocation for the individual year and service area.

3 Projected demand is based historical flow information. Amounts have not been reduced due to effects of conservation or reclaimed water offsetting potable irrigation.

4 The Northwest and Northeast service areas are currently in the process of being interconnected.

5 SJRWMD Northeast CUP expired November 30, 2003. Renewal application submitted to District. Previous allocation shown.

6 SJRWMD Southeast CUP expired December 31, 2003. Renewal application submitted to District. Previous allocation shown.

7 The Black Hammock Service Area is served through a wholesale contract with the City of Oviedo.

Note: Projected deficits are based on existing facility capacity and current conservation efforts.

Seminole County Environmental Services

TABLE 3 - Proposed Water Supply Projects For Draft Work Plan - Description

CIP No.	Project Title	Project Description	Capacity Increase (ADF/mgd)	Water Supply Source	Funding Source	Total $ Amount	Starting Year
0217 01	WS Oversizings/Extensions	To oversize and/or extend as necessary, water mains that are developer constructed to accommodate Master Plan requirements. Design and construction reimbursements to developer are via an amendment (Exhibit G) to the sewer utility agreement.		Aquifer	Water and Sewer	$3,600,000	2004
0636 01	WS Chapman Road Utility Relocation	Construct 30-in water transmission main south of Chapman Road in Florida Power & Light easement from SR426 to SR434.		Aquifer	Water and Sewer	$1,055,399	2004
0647 02	WS/Lockwood Road Water Main	Construct a 12" and 16" water main on McCulloch to Old Lockwood Road, then north on Lockwood Road to existing main. Also construct a water main north of the Seminole Community College, Oviedo/East Campus.		Aquifer	Water Connection Fee	$253,547	2004
0647 02	WS/Lockwood Road Water Main	Construct a 12" and 16" water main on McCulloch to Old Lockwood Road, then north on Lockwood Road to existing main. Also construct a water main north of the Seminole Community College, Oviedo/East Campus.		Aquifer	W/S 21M Debt P	$1,237,907	2004
1318 01	WS/Markham Regional Water Treatment Plant	Design, permit, bid and construct a new 3.0 million gallon per day water treatment plant in the Northwest Service Area at Orange Boulevard and First Street to serve growth in that area.		Aquifer	W/S 21M Debt P	$200,000	2004
1643 01	WS/Water 2020 Surface Water Plant Feasibility Study	Study to determine feasibility of a surface water plant in response to St Johns River Water Management District's 2020 Water Supply Study.		Aquifer	W/S 21M Debt P	$600,000	2005
1688 01	WS/Consumers/Lake Hayes Water Transmission	Evaluate, design, & construct a large diameter 30" & 24" water transmission main to provide a significant hydraulic connection between Southeast Regional Water Treatment Plant and Lake Hayes Water Treatment Plant.		Aquifer	Water Connection Fee	$2,403,208	2004
1688 01	WS/Consumers/Lake Hayes Water Transmission	Evaluate, design, & construct a large diameter 30" & 24" water transmission main to provide a significant hydraulic connection between Southeast Regional Water Treatment Plant and Lake Hayes Water Treatment Plant.		Aquifer	Water and Sewer	$861,706	2004
1783 01	WS/Country Club Well #3	Design and construct Country Club Water Treatment Plant Well #3.	1.0	Aquifer	W/S 21M Debt P	$107,927	2004
1783 01	WS/Country Club Well #3	Design and construct Country Club Water Treatment Plant Well #3.		Aquifer	Unfunded	$555,785	2004
1806 01	WS/Ranchland Trail Area Water Mains	Design and construct 12" water mains on Ranchland Tr from Freyer Dr to Lazy Acre Ln. on Lazy Acre Ln/Bay Meadow Rd from Ranchland Tr to CR427, and on CR427; 8" water mains on Meadow Bend Dr, and on Florida Power easement from Meadow Bend Dr to Equestrienne Club Ln.		Aquifer	Water Connection Fee	$295,000	2007
1816 01	WS/Alternative Water Supply Phase II	To study potential impacts to County's distribution system caused by the addition of a new surface water treatment plant. This project will also include suggestions for infrastructure changes and preliminary geotechnical investigations of the site for aquifer storage.		Aquifer	Water and Sewer	$6,000,000	2004
1931 01	WS/Markham Woods Rd WM Extension	Construct 12-in water main on Markham Woods Rd from Acre Ct to Hanover Woods (Greentree Ln).		Aquifer	Water Connection Fee	$150,000	2004

Seminole County Environmental Services

TABLE 3 - Proposed Water Supply Projects For Draft Work Plan - Description

CIP No.	Project Title	Project Description	Capacity Increase (ADF/mgd)	Water Supply Source	Funding Source	Total $ Amount	Starting Year
1932 01	WS/Fire Flow Improvements	Design and construct needed fire hydrants and associated mains to provide fire flow.		Aquifer	Water Connection Fee	$500,000	2004
1935 01	WS/Heathrow Elementary Water Main Extension	Design and construction of a new 12" water main on Markham Woods Road from Heathrow Elementary to Markham Road.		Aquifer	Water Connection Fee	$100,000	2004
1937 01	WS/Greenwood Blvd Water Main Upsizing	Water main upsizing on Greenwood Blvd from Longwood-Lake Mary Road to Greenwood Lakes Water Treatment Plant discharge point on Greenwood Blvd.		Aquifer	Water Connection Fee	$400,000	2005
1938 01	WS/Lake Hayes WTM Connection	Design and construct 12" water transmission main extension on Florida Power and Light easement from SR 434 to Lake Hayes Water Treatment Plant.		Aquifer	Water Connection Fee	$350,000	2008
2004 01	WS Markham Regional WTP Aquifer Storage and Recovery System	Preliminary design, final design, and construction of aquifer storage and recovery (ASR) system on or adjacent to Markham Regional Water Treatment Plant at 5651 Orange Boulevard.		Aquifer	W/S 21M Debt P	$88,000	2004
2004 01	WS Markham Regional WTP Aquifer Storage and Recovery System	Preliminary design, final design, and construction of aquifer storage and recovery (ASR) system on or adjacent to Markham Regional Water Treatment Plant at 5651 Orange Boulevard.		Aquifer	Water and Sewer	$100,000	2004
2128 01	WS/Country Club/Greenwood Lakes WTP Improvements	Replace three 1,600 gpm high service pumps, add a 0.5 million gallon ground storage tank with aerator at Country Club Water Treatment Plant. Replace two 1,650 gpm high service pumps at Greenwood Lakes Water Treatment Plant.		Aquifer	Water Connection Fee	$300,000	2007
2141 01	WS/Markham Regional Water Treatment Plant	BCR Additional funds are needed for the Markham Regional Water Treatment Plant for permitting and construction of the following: Supply well number 3 needed to maintain plant design capacity., Three (3) saltwater intrusion monitoring wells as required by St. John's River Management District as part of the new Consumptive Use Permit.		Aquifer	Water and Sewer	$565,000	2004
2143 01	WS/Southwest Service Area New Water Main	Construction of the following: 939 LF of new 8" WM along Balmy Beach Dr. 545 LF of new 16" WM along Bear lake Rd. from Anna Rd. To Bonnie Dr.. 4994 LF of new 8" WM along Holiday Ave from Balmy Beach Dr. to Bear Lake Rd. 850 LF of new 8" WM along Forest Lake from McNiel to Bonnie Dr. 4692 Lf of new 8" WM along Lineal Beach Drive and Sombrero Avenue. 2722 LF of new 8" WM along Lineal Beach Drive from Bear Lake Rd. to Sombrero Ave. 1264 LF of new 8" WM along Sombrero Ave. from Lineal Beach Dr. to Jessica Dr. 706 LF along Sombrero Ave. from Jessica Dr. to Pemberton Dr.		Aquifer	Water Connection Fee	$536,000	2007
2144 01	WS/Southeast Regional to Lake Hayes Water Transmission Main Phase II	Construction of 3160 linear feet of new 24 inch Water Main from Alafaya Trail to Lake Hayes Water Treatment Plant for Ground Storage, Tanks Storage		Potable	Water Connection Fee	$384,000	2008
2146 01	WS/Winnebago Wilshire Blvd Water Main Upgrade	Construct 1,151 ft of 12" water main on Winnebago Trail from Wilshire Blvd to near Waverly liftstation.		Aquifer	Water Connection Fee	$73,029	2004

Seminole County Environmental Services

TABLE 3 - Proposed Water Supply Projects For Draft Work Plan - Description

CIP No.	Project Title	Project Description	Capacity Increase (ADF/mgd)	Water Supply Source	Funding Source	Total $ Amount	Starting Year
2147 01	WS/Rising Sun Water Main Upgrade	Design and construct 1,142 ft of 12" water main on Rising Sun Blvd from Red Bug Lake Rd to La Masa Ave.		Aquifer	Water Connection Fee	$72,427	2008
2148 01	WS/Dodd Road Water Main Phase II	Design and construct 1,453 ft of 16" water main on Dodd Rd from Red Bug Lake Rd to Biscayne Dr and 1,590 ft of 16" water main on Howell Branch Rd from Dodd Rd to Bear Gully Rd.		Aquifer	Water Connection Fee	$225,913	2008
2149 01	WS/Grand Rd Upgrade Pipes	Construct 1,908 ft of 16" water main to replace existing 10" water main on Grand Rd from Dike Rd to Old Wharf Run.		Aquifer	Water Connection Fee	$141,609	2008
2165 01	WS/Elder Road/Orange Boulevard Pipe Replacement	Design and construct 10,904 ft of 12" water main on Elder Rd, Orange Blvd, Dolgner Pl and Kastner Pl.		Aquifer	Water and Sewer	$691,872	2008
2166 01	WS/Markham Water Treatment Plant Improvements Phase II	Construct two 2,400 gpm wells, 6,000 ft of 16" raw water piping, a 1.5 million gallon ground storage tank with a 4,800 gpm aerator, and two 3,200 gpm high service pumps.	3.0	Aquifer	Water Connection Fee	$3,000,000	2004
2167 01	WS/Markham Water Treatment Plant Forced Draft Aeration	Construct a forced draft aeration system at Markham Regional Water Treatment Plant during the Phase II expansion.		Aquifer	Water Connection Fee	$300,000	2004
2168 01	WS/ Elder Road New Water Main	Construction of 3420 LF of new 12" WM on Elder From South of Narcissus to Church Street.		Aquifer	Water Connection Fee	$217,000	2007
2169 01	WS/Northwest Service Area South Loop Water Main	Construct 4,901 LF of new 16" WM as follows: 1,081 LF along Markham Woods Dr. from Long Pond to Alaqua Dr.; 3,820 LF on Long Pond from NWNE Interconnect to Markham Woods Rd.		Aquifer	Water Connection Fee	$90,000	2007
2174 01	WS/SR 46, Yankee Lake Road, Longwood Markham Road Utility Improvements	Design and Construct: 6,264-ft of 12-in WM on Longwood Markham Rd. from Steeple Chase to Markham Rd; 797-ft of 12in WM on Markham Rd.from Longwood Markham Rd. proceeding east.		Aquifer	Sewer Connection Fee	$900,000	2005
2177 01	WS/Orange Boulevard Replacement and Upgrade	Construct replacement to 12" water main with 2,928 ft of 24" water main on Orange Blvd from Markham Rd to Climbing Rose Wy. Construct replacement to 12" water main with 3,389 ft of 24" water main on Orange Blvd from Climbing Rose Wy to SR46.		Aquifer	Sewer Connection Fee	$1,559,200	2006
W101	SR 46 NEW/UPGRADE Phase 1 Pipes	Construction of 6,676 LF of new and upgrade WM along SR46 and Lake Forest Boulevard. Construction as follows: 1,278 LF upgrade to 20" along SR46 from Lake Forest east; 1,684 LF upgrade to 16" WM along Lake Forest Boulevard; 3, 715 LF of new 8" WM along SR 46 from Longwood Markham Road to River Oaks Circle.		Aquifer	Water Connection Fee	$414,853	2010
W020 B	Dodd Road NEW/UPGRADE Pipes Phase 1	Construction of 3,043 LF of new and upgrade WM along Dodd Road and Howell Branch Roads. Construction as follows: 1,453 LF new to 16" WM along Dodd Road from Red Bug Lake Road to Biscayne Drive; 1,590 LF upgrade to 16" WM along Howell Branch Road from Dodd Road to Bear Gully Road.		Aquifer	Water Connection Fee	$225,913	2010
W030	Rising Sun UPGRADE Pipes	Construction of 1,142 LF upgrade to 12" WM along Rising Sun Boulevard.		Aquifer	Water Connection Fee	$72,427	2010

Seminole County Environmental Services

TABLE 3 - Proposed Water Supply Projects For Draft Work Plan - Description

CIP No.	Project Title	Project Description	Capacity Increase (ADF/mgd)	Water Supply Source	Funding Source	Total $ Amount	Starting Year
W009	Lynnwood AC Pipe REPLACEMENT	Construction of 6,474 LF to remove AC 8" WM and replace with new 8" WM (remove and replace) in subdivision area west of Lynwood WTP.		Aquifer	Water Connection Fee	$279,639	2010
W012	South Forest Lake NEW Pipe	Construction of new 8" WM along Forest Lake Drive from McNeil Road to Bonnie Drive.		Aquifer	Water Connection Fee	$36,726	2010
W024	McCulloch Road UPGRADE Pipes	Construction of 746 LF upgrade to 16" WM along McCulloch Road from east of Lockwood to Keats.		Aquifer	Water Connection Fee	$55,364	2015
W121	Orange Boulevard UPGRADE Phase 2 Pipes	Construction of 6,317 LF of upgrade WM along Orange Boulevard. Construction as follows: 2,928 LF upgrade to 24" from near 1st Street to Climbing Rose; 3,389 LF upgrade to 20" from Climbing Rose to just south of SR 46.		Aquifer	Water Connection Fee	$698,839	2015
W117	North Carolina NEW Pipes	Construction of 2,281 LF of new 8" WM along North Carolina Lane. Construction as follows: 1,194 LF of new 8" WM along North Carolina Lane from Tiffany Lane to south; 1,087 LF of new 8" WM from end of Tiffany Lane to Old Western Trail.		Aquifer	Water Connection Fee	$98,520	2015
				Subtotal of Work Plan Potable Water Projects		**$29,796,810**	
1005 02	WS/Sem Co./Sanford/Lk Mary Tri Party Reclaimed Water Project	Provide reclaimed water to Seminole County's NW service area, particularly in the Heathrow/International Pkwy extension area. The reclaimed water is via City of Sanford's Wastewater Treatment Plant through an interlocal agreement with Sanford, Lake Mary and County.		Reclaimed	Sewer Connection Fee	$798,753	2004
1640 01	WS/NWRWWTF Reclaim System Improvement	Increase reclaim capacity. Transmission main starts at Lake Markham Road with 20" pipe to Orange Boulevard and 20" pipe from Orange Boulevard to International Parkway.		Reclaimed	Sewer Connection Fee	$280,579	2004
1645 01	WS/Eastern Regional Reclaimed Water Distribution System	To provide reclaimed water to commercial and residential customers in the SE service area via an interlocal agreement with the City of Orlando. City of Oviedo and UCF will be customers of Seminole County for the provision of wholesale reclaimed water.		Reclaimed	Sewer Connection Fee	$5,725,800	2004
1646 01	WS/Seminole County/City of Oviedo Reclaimed	Construction of 13,000 LF RWM as follows: 8,100 LF on Old lockwood Blvd. from Lockwood Blvd to Mc Culloch Rd. East on McCulloch for 4,900 LF to provide reclaimed water to Sem Co. and City of Oviedo customers. Pipeline will be jointly funded and constructed via interlocal agreement. Oviedo's connection point will be at the north end of Old Lockwood Rd. Reclaim via Iron Bridge through interlocal with Orlando.		Reclaimed	Sewer Connection Fee	$1,100,000	2004
1782 01	WS/Markham Woods Road Reclaimed Water Main	Design and construct 8,100 ft of a 12" reclaimed water main on Markham Woods Rd from Alaqua Rd to Timberbrook Dr.		Reclaimed	Sewer Connection Fee	$2,670,680	2004
1812 01	Northwest Regional WWTF Reclaim Discharge Main	Design and construct the Northwest Regional WWTF reclaimed discharge main		Reclaimed	Sewer Connection Fee	$1,391,040	2004

Seminole County Environmental Services

TABLE 3 - Proposed Water Supply Projects For Draft Work Plan - Description

CIP No.	Project Title	Project Description	Capacity Increase (ADF/mgd)	Water Supply Source	Funding Source	Total $ Amount	Starting Year
1823 01	WS/Markham Woods Rd Reclaimed Water Main	Design and construct 12 inch reclaimed water main on Markham Woods Rd from Timberbrook Dr north to Markham Rd & on Markham Rd from Markham Woods Rd west to Lake Markham Rd. This project is to close a hydraulic loop and improve system pressures and reliability per Reuse Master Plan.		Reclaimed	Sewer Connection Fee	$1,192,300	2004
1829 01	WS/GWL Reuse Ground Storage Tank	1.75 million gallon concrete tank.		Reclaimed	Sewer Connection Fee	$1,312,727	2004
1953 01	WS/Reclaimed Water System Improvements	Oversize and/or extension of reclaim water mains to accommodate Master Plan requirements or other County goals. Design and construction reimbursements to developer's are via an amendment (Exhibit G) to the Reclaim Water Agreement.		Reclaimed	Sewer Connection Fee	$2,500,000	2004
2009 01	WS AAA Drive Reclaim Water Main	Installation of 8 inch reclaim water main on AAA Drive from International Parkway to Business Center Drive.		Reclaimed	Sewer Connection Fee	$200,000	2004
2163 01	WS/GWL/NW Regional Ground Storage Tanks	Modify Greenwood Lakes and Northwest Regional WWTF's reclaim water Ground Storage to allow reclaimed distribution water to augmentation sources to re-fill reclaim water GSTs during the day		Reclaimed	Water and Sewer	$150,000	2004
2171 01	WS/Heathrow New Reclaim Main	17098 LF of 12" RM as follows: 1592 LF along CR 46A. from International Parkway to Orange Blvd; 15,507 LF along Heathrow Blvd. from Orange Blvd to Bridgewater Dr: Bridgewater Dr. From Heathrow Blvd. to Existing Reclaim Main.		Reclaimed	Sewer Connection Fee	$1,725,000	2006
2172 01	WS/Reclaim Retrofits Phase II	Reclaim Retrofit for Alaqua Lakes. Estimated 0.62 MGD reclaimed water usage.		Reclaimed	Sewer Connection Fee	$3,800,000	2006
2173 01	WS/Reclaim Retrofits Phase I	Reclaim Retrofit in Heathrow Woods, Bristol Park, Chestnut Hill, East Camden and Magnolia Plantation. Estimated 1.09 MGD reclaimed water usage.		Reclaimed	Sewer Connection Fee	$4,600,000	2004
2174 01	WS/SR 46, Yankee Lake Road, Longwood Markham Road Utility Improvements	Design and Construct: 3,610-ft of 20-in RM parallel to existing 16-in RM on Yankee Lake Rd from SR 46 to Northwest Regional WWTF; 1,354-ft of 16-in RM on SR 46 from Yankee Lake Rd to Longwood Markham Rd; 3,190-ft of 16-in RM on Longwood Markham Rd from SR46 to Lake Ross; 4,702-ft of 16-in RM on Longwood Markham Rd from Lake Ross to Markham Rd; 4,600-ft of 16-in RM on Markham Rd from Longwood Markham Rd to Lake Markham Rd.		Reclaimed	Sewer Connection Fee	$900,000	2005
2176 01	WS/Augmentation Wells Northwest Reclaim	Hydro study and construction of three augmentation wells (2.75 MGD) for reclaimed water redundancy to the tri-party agreement		Reclaimed	Sewer Connection Fee	$1,725,000	2005
2178 01	WS/Reclaimed Water Storage and Repump Facility	New storage and repump facility with a 2.0 MG ground storage tank and two 2,200 gpm high service pumps is planned to transfer reclaimed water to the Northwest Service Area during peak conditions, including construction of 1,275 LF of 20" RM in Northwest Service		Reclaimed	Sewer Connection Fee	$1,700,000	2005
2184 01	WS/Alaqua Lakes Boulevard New Reuse Main	Construct 2,066 LF of 8" RM along Alaqua Lakes Blvd from Lake Mary Blvd to Alaqua Lakes Golf Course		Reclaimed	Sewer Connection Fee	$89,000	2006

Seminole County Environmental Services

TABLE 3 - Proposed Water Supply Projects For Draft Work Plan - Description

CIP No.	Project Title	Project Description	Capacity Increase (ADF/mgd)	Water Supply Source	Funding Source	Total $ Amount	Starting Year
2230 01	WS/Reclaim Retrofit Phase III	Reclaim Retrofit for Alaqua, Lake Markham Preserve Phase I and Carisbrook. Estimated 0.34 MGD reclaimed water usage.		Reclaimed	Sewer Connection Fee	$2,160,000	2006
2231 03	WS/Reclaim Retrofit Phase IV	Design and construct reclaimed water residential retrofits for Stonebridge, Breckenridge Heights, Wembly Park, Wyntree and Lakeside subdivisions. Estimated 0.33 MGD reclaimed water usage.		Reclaimed	Sewer Connection Fee	$1,315,000	2006
2232 01	WS/Reclaim Retrofit Phase V	Design and construct reclaimed water residential retrofits for Cherry Ridge, Burlington Oaks, Kentford Gardens and Heron Ridge subdivisions. Estimated 0.33 MGD reclaimed water usage.		Reclaimed	Sewer Connection Fee	$1,503,000	2008
					Subtotal of Work Plan Sewer Projects	**$36,838,879**	
Alternative Water Supply Study Projects Not In Current CIP							
1	Alternative Water - Phase I, Brackish Water WTP	Lower Floridan Aquifer at Yankee Lake, Potable / Irrigation Water Quality		Brackish	Bonds / Grants	$18,805,000	2004
2	Alternative Water - Phase I, Brackish Water Well	Lower Floridan Aquifer at Greenwood Lakes		Brackish	Bonds / Grants	$900,000	2004
3	Alternative Water - Phase I, Brackish Water Horiz Well	Horizontal Wells, Irrigation Quality		Aquifer	Bonds / Grants	$1,500,000	2004
4	Alternative Water - Phase I, Brackish Water Stormwater	Stormwater, Irrigation Quality		Stormwater	Bonds / Grants	$1,000,000	2004
5	Alternative Water - Phase I, Brackish Water Infrastructure	Infrastructure - Distribution from Yankee Lake Water Resources Center to Seminole County Service Area		Brackish	Bonds / Grants	$6,000,000	2004
					Subtotal of 2020 Alternative Water Supply Study Projects Not In Current CIP	**$28,205,000**	
		TOTAL				**$94,840,689**	

Seminole County Environmental Services

TABLE 4 - Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	FISCAL YEAR 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
Potable Water Work Plan Projects														
0217 01	WS Oversizings/Extensions	$600,000	$750,000	$750,000	$750,000	$750,000	$0	$0	$0	$0	$0	$0	$0	$3,600,000
0636 01	WS Chapman Road Utility Relocation	$1,055,399	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,055,399
0647 02	WS/Lockwood Road Water Main	$253,547	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$253,547
0647 02	WS/Lockwood Road Water Main	$1,237,907	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,237,907
1318 01	WS/Markham Regional Water Treatment Plant	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200,000
1643 01	WS/Water 2020 Surface Water Plant Feasibility Study	$0	$150,000	$150,000	$150,000	$150,000	$0	$0	$0	$0	$0	$0	$0	$600,000
1688 01	WS/Consumers/Lake Hayes Water Transmission	$2,403,208	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,403,208
1688 01	WS/Consumers/Lake Hayes Water Transmission	$861,706	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$861,706
1783 01	WS/Country Club Well #3	$107,927	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$107,927
1783 01	WS/Country Club Well #3	$555,785	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$555,785
1806 01	WS/Ranchland Trail Area Water Mains	$0	$0	$0	$295,000	$0	$0	$0	$0	$0	$0	$0	$0	$295,000
1816 01	WS/Alternative Water Supply Phase II	$800,000	$200,000	$2,500,000	$2,500,000	$0	$0	$0	$0	$0	$0	$0	$0	$6,000,000
1931 01	WS/Markham Woods Rd WM Extension	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$150,000
1932 01	WS/Fire Flow Improvements	$100,000	$100,000	$100,000	$100,000	$100,000	$0	$0	$0	$0	$0	$0	$0	$500,000
1935 01	WS/Heathrow Elementary Water Main Extension	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000
1937 01	WS/Greenwood Blvd Water Main Upsizing	$0	$80,000	$320,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$400,000
1938 01	WS/Lake Hayes WTM Connection	$0	$0	$0	$0	$350,000	$0	$0	$0	$0	$0	$0	$0	$350,000
2004 01	WS Markham Regional WTP Aquifer Storage and Recovery System	$88,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$88,000
2004 01	WS Markham Regional WTP Aquifer Storage and Recovery System	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000
2128 01	WS Country Club/Greenwood Lakes WTP Improvements	$0	$0	$0	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$300,000

Seminole County Environmental Services

TABLE 4 - Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	FISCAL YEAR 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
2141 01	WS/Markham Regional Water Treatment Plant	$565,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$565,000
2143 01	WS/Southwest Service Area New Water Main	$0	$0	$0	$536,000	$0	$0	$0	$0	$0	$0	$0	$0	$536,000
2144 01	WS/Southeast Regional to Lake Hayes Water Transmission Main Phase II	$0	$0	$0	$0	$384,000	$0	$0	$0	$0	$0	$0	$0	$384,000
2146 01	WS/Winnebago-Wilshire Blvd Water Main Upgrade	$73,029	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$73,029
2147 01	WS/Rising Sun Water Main Upgrade	$0	$0	$0	$0	$72,427	$0	$0	$0	$0	$0	$0	$0	$72,427
2148 01	WS/Dodd Road Water Main Phase II	$0	$0	$0	$0	$225,913	$0	$0	$0	$0	$0	$0	$0	$225,913
2149 01	WS/Grand Rd Upgrade Pipes	$0	$0	$0	$0	$141,609	$0	$0	$0	$0	$0	$0	$0	$141,609
2165 01	WS/Elder Road/Orange Boulevard Pipe Replacement	$0	$0	$0	$0	$691,872	$0	$0	$0	$0	$0	$0	$0	$691,872
2166 01	WS/Markham Water Treatment Plant Improvements Phase II	$3,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,000,000
2167 01	WS/Markham Water Treatment Plant Forced Draft Aeration	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$300,000
2168 01	WS/ Elder Road New Water Main	$0	$0	$0	$217,000	$0	$0	$0	$0	$0	$0	$0	$0	$217,000
2169 01	WS/Northwest Service Area South Loop Water Main	$0	$0	$0	$90,000	$0	$0	$0	$0	$0	$0	$0	$0	$90,000
2174 01	WS/SR 46, Yankee Lake Road, Longwood Markham Road Utility Improvements	$0	$180,000	$720,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$900,000
2177 01	WS/Orange Boulevard Replacement and Upgrade	$0	$0	$312,000	$1,247,200	$0	$0	$0	$0	$0	$0	$0	$0	$1,559,200
W101	SR 46 NEW/UPGRADE Phase 1 Pipes	$0	$0	$0	$0	$20,743	$41,485	$352,625	$0	$0	$0	$0	$0	$414,853
W020_B	Dodd Road NEW/UPGRADE Pipes Phase 1	$0	$0	$0	$0	$11,296	$22,591	$192,026	$0	$0	$0	$0	$0	$225,913
W030	Rising Sun UPGRADE Pipes	$0	$0	$0	$0	$3,621	$7,243	$61,563	$0	$0	$0	$0	$0	$72,427
W009	Lynnwood AC Pipe REPLACEMENT	$0	$0	$0	$0	$13,982	$27,964	$237,693	$0	$0	$0	$0	$0	$279,639
W012	South Forest Lake NEW Pipe	$0	$0	$0	$0	$1,836	$3,673	$31,217	$0	$0	$0	$0	$0	$36,726

Seminole County Environmental Services

TABLE 4 - Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	FISCAL YEAR 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
W024	McCulloch Road UPGRADE Pipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,768	$5,536	$47,059	$55,364
W121	Orange Boulevard UPGRADE Phase 2 Pipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$34,942	$69,884	$594,013	$698,839
W117	North Carolina NEW Pipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,926	$9,852	$83,742	$98,520
	Subtotal of Potable Water Work Plan Projects	$12,551,508	$1,460,000	$4,852,000	$6,185,200	$2,917,299	$102,956	$875,125	$0	$0	$42,636	$85,272	$724,815	**$29,796,810**
Sewer Work Plan Projects														
1005 02	WS/Sem Co./Sanford/Lk Mary Tri Party Reclaimed Water Project	$798,753	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$798,753
1640 01	WS/NWRWWTF Reclaim System Improvement	$280,579	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$280,579
1645 01	WS/Eastern Regional Reclaimed Water Distribution System	$5,725,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,725,800
1646 01	WS/Seminole County/City of Oviedo Reclaimed	$1,100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,100,000
1782 01	WS/Markham Woods Road Reclaimed Water Main	$2,670,680	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,670,680
1812 01	Northwest Regional WWTF Reclaim Discharge Main	$1,391,040	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,391,040
1823 01	WS/Markham Woods Rd Reclaimed Water Main	$1,192,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,192,300
1829 01	WS/GWL Reuse Ground Storage Tank	$1,312,727	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,312,727
1953 01	WS/Reclaimed Water System Improvements	$1,500,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,500,000
2009 01	WS AAA Drive Reclaim Water Main	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200,000
2163 01	WS/GWL/NW Regional Ground Storage Tanks	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$150,000
2171 01	WS/Heathrow New Reclaim Main	$0	$0	$350,000	$1,375,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,725,000
2172 01	WS/Reclaim Retrofits Phase II	$0	$0	$3,800,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,800,000
2173 01	WS/Reclaim Retrofits Phase I	$2,200,000	$2,400,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,600,000

Seminole County Environmental Services

TABLE 4 - Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	FISCAL YEAR 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
2174 01	WS:SR 46, Yankee Lake Road, Longwood Markham Road Utility Improvements	$0	$180,000	$720,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$900,000
2176 01	WS/Augmentation Wells Northwest Reclaim	$0	$350,000	$1,375,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,725,000
2178 01	WS/Reclaimed Water Storage and Repump Facility	$0	$340,000	$1,360,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,700,000
2184 01	WS/Alaqua Lakes Boulevard New Reuse Main	$0	$0	$89,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$89,000
2230 01	WS/Reclaim Retrofit Phase III	$0	$0	$432,000	$1,728,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,160,000
2231 03	WS/Reclaim Retrofit Phase IV	$0	$0	$263,000	$1,052,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,315,000
2232 01	WS/Reclaim Retrofit Phase V	$0	$0	$0	$0	$1,503,000	$0	$0	$0	$0	$0	$0	$0	$1,503,000
	Subtotal of Sewer Work Plan Projects	$18,521,879	$4,270,000	$8,389,000	$4,155,000	$1,503,000	$0	$0	$0	$0	$0	$0	$0	**$36,838,879**
Alternative Water Supply Study Projects Not In Current CIP														
1	Alternative Water - Phase I, Brackish Water WTP	$188,050	$376,100	$564,150	$1,880,500	$7,898,100	$7,898,100	$0	$0	$0	$0	$0	$0	$18,805,000
2	Alternative Water - Phase I, Brackish Water Well	$9,000	$18,000	$27,000	$90,000	$378,000	$378,000	$0	$0	$0	$0	$0	$0	$900,000
3	Alternative Water - Phase I, Brackish Water Horiz Well	$15,000	$30,000	$45,000	$150,000	$630,000	$630,000	$0	$0	$0	$0	$0	$0	$1,500,000
4	Alternative Water - Phase I, Brackish Water Stormwater	$10,000	$20,000	$30,000	$100,000	$420,000	$420,000	$0	$0	$0	$0	$0	$0	$1,000,000
5	Alternative Water - Phase I, Brackish Water Infrastructure	$60,000	$120,000	$180,000	$600,000	$2,520,000	$2,520,000	$0	$0	$0	$0	$0	$0	$6,000,000
	Subtotal of 2020 Alternative Water Supply Study Projects Not In Current CIP	$282,050	$564,100	$846,150	$2,820,500	$11,846,100	$11,846,100	$0	$0	$0	$0	$0	$0	**$28,205,000**

Seminole County Environmental Services

TABLE 4 - Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	FISCAL YEAR 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
	Total Proposed Water Supply Projects For Draft Work Plan (Current CIP, Master Plan Update & 2020 Alternative Water)	$31,355,437	$6,294,100	$14,087,150	$13,160,700	$16,266,399	$11,949,056	$875,125	$0	$0	$42,636	$85,272	$724,815	$94,840,689

ATTACHMENT D

Proposed Amendment To The Capital Improvements Element: Update of Five Year Potable Water Capital Projects Listing

Summary of Policies, Programs and Capital Improvements with Cost Impacts
Potable Water and Sanitary Sewer

NOTE: Mid-Fiscal Year Update to Accommodate Water Supply Facilities Work Plan

A new section has been added to the bottom of this page, the Capacity/Improvements Summary page has been revised and a separate listing of revised or new capital projects addressing the Work Plan has been inserted. The original figures for the Total 5 Year Water and Sewer Costs as shown on this page and the original capital project listing (not included here) have not been changed. The annual 2004 CIE Update will revise and re-incorporate all projects as adopted by the Board during the 2004/05 budget process in September of 2004.

Scheduled Program and Cost Impacts for 10/1/2003 - 9/30/2008	
Among the projects scheduled for Environmental Services is a Computerized Maintenance Management Program for tracking all equipment and work orders, expansion of the Northwest Regional Wastewater Treatment facility to 5 million gallons a day (MGD) and expansion of the reclaimed system to include residential service in the Northwest area.	
Total 5 Year Water Cost	**$54,550,564**
Total 5 Year Sewer Cost	**$70,792,698**
Grand 5 Year Cost	**$125,343,262**

Potential Additional Cost Impacts During/Beyond The Five Year Planning Period

The required levels of treatment for sewer and water and programs needed to implement the treatment may change as the EPA continues research resulting in legislative amendments. Implementation of Master Plan recommendations has been initiated with the addition of several plant and distribution improvements. (Also see Water Supply facilities Work Plan below.)

Available Funding Options - Major revenue sources available to the Board of County Commissioners (either existing or available without voter approval) to fund all or portions of the Potable Water Capital Improvement Element Update are: General fund, Water and Sewer Enterprise fund, Water Connection Fee fund, Water and Sewer 21M Bond Proceeds, Development Review Fund. The revenue capacities associated with each of the above major revenues provide sufficient funding to enable full implementation of the five year schedule of improvements identified as part of the CIE Update.

Water Supply Facilities Work Plan - Status Update

- Projects overview: The County is proposing a conservative Work Plan to meet the projected water demand over the next ten years for the four major County service areas. The main components of the Work Plan revolve around the following four basic areas. A more detailed water supply strategy can be found within the Work Plan's Executive Summary:
  - i. Development and optimization of groundwater supplies
  - ii. Expansion of reclaimed water systems
  - iii. Water conservation program including conservation rate structure
  - iv. Evaluation of alternative water sources
- Project funding: Water and sewer connection fees, bonds and grans
- Project Cost Summary (FY 2004/05 - 2014/15):
  - 1st 5 FY year project list (includes 2004 approved projects) **$ 93,112,842**
  - 2nd 6 FY year project list (2010 through 2015) **$ 1,727,848**
  - Total 11 FY year project list **$ 94,840,689**

Note: See the "Water Supply Facilities Work Plan", a support document to the Potable Water Element, for a full and current description of each project.

Projections of Service Area Potable Water Demands and Permitted Groundwater Capacity

Water Service Areas (mgd)	2003 Design Capacity (ADF) (1)	2003 Permit SJRWMD Alloc (2)	2003 Current Demand (ADF)	2003 Permit Surplus/ (Deficit)
N West (4)	8.196	5.790	4.678	**1.112**
N East (4)(5)	4.031	3.020	1.976	**1.044**
S East (6)	13.080	9.150	7.825	**1.325**
S West	2.560	1.480	1.167	**0.313**
TOTALS	27.867	19.440	15.646	
Blk Hmk (7)	0.175	NA	0.098	**0.077**

Water Service Areas (mgd)	2010 Design Capacity (ADF) (1)	2010 Permit SJRWMD Alloc (2)	2010 Projected Demand (3)	2010 Permit Surplus/ (Deficit)
N West (4)	11.258	8.230	9.960	**(1.730)**
N East (4)(5)	5.111	3.020	3.550	**(0.530)**
S East (6)	13.080	9.150	11.200	**(2.050)**
S West	2.560	1.480	1.400	**0.080**
TOTALS	32.009	21.880	26.110	
Blk Hmk (7)	0.175	NA	0.133	**0.042**

Water Service Areas (mgd)	2015 Design Capacity (ADF) (1)	2015 Permit SJRWMD Alloc (2)	2015 Projected Demand (3)	2015 Permit Surplus/ (Deficit)
N West (4)	11.258	8.230	11.510	**(3.280)**
N East (4)(5)	5.111	3.020	3.600	**(0.580)**
S East (6)	13.080	9.150	12.430	**(3.280)**
S West	2.560	1.480	1.460	**0.020**
TOTALS	32.009	21.880	29.000	
Blk Hmk (7)	0.175	NA	0.133	**0.042**

Water Service Areas (mgd)	2020 Design Capacity (ADF) (1)	2020 Permit SJRWMD Alloc (2)	2020 Projected Demand (3)	2020 Permit Surplus/ (Deficit)
N West (4)	11.258	8.230	11.720	**(3.490)**
N East (4)(5)	5.111	3.020	3.930	**(0.910)**
S East (6)	13.080	9.150	12.670	**(3.520)**
S West	2.560	1.480	1.460	**0.020**
TOTALS	32.009	21.880	29.780	
Blk Hmk (7)	0.175	NA	0.133	**0.042**

1 Physical plant permitted average day capacity.

2 Daily average pumping amount based on SJRWMD permit allocation for the individual year and service area.

3 Projected demand is based historical flow information. Amounts have not been reduced due to effects of conservation or reclaimed water offsetting potable irrigation.

4 The Northwest and Northeast service areas are currently in the process of being interconnected.

5 SJRWMD Northeast CUP expired November 30, 2003. Renewal application submitted to District. Previous allocation shown

6 SJRWMD Southeast CUP expired December 31, 2003. Renewal application submitted to District. Previous allocation shown

7 The Black Hammock Service Area is served through a wholesale contract with the City of Oviedo

Note: Projected deficits are based on existing facility capacity and current conservation efforts.

Seminole County Environmental Services

Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	2005	2006	2007	2008	2009
Potable Water Work Plan Projects							
0217 01	WS Oversizings/Extensions	$600,000	$750,000	$750,000	$750,000	$750,000	$0
0636 01	WS Chapman Road Utility Relocation	$1,055,399	$0	$0	$0	$0	$0
0647 02	WS/Lockwood Road Water Main	$253,547	$0	$0	$0	$0	$0
0647 02	WS/Lockwood Road Water Main	$1,237,907	$0	$0	$0	$0	$0
1318 01	WS/Markham Regional Water Treatment Plant	$200,000	$0	$0	$0	$0	$0
1643 01	WS/Water 2020 Surface Water Plant Feasibility Study	$0	$150,000	$150,000	$150,000	$150,000	$0
1688 01	WS/Consumers/Lake Hayes Water Transmission	$2,403,208	$0	$0	$0	$0	$0
1688 01	WS/Consumers/Lake Hayes Water Transmission	$861,706	$0	$0	$0	$0	$0
1783 01	WS/Country Club Well #3	$107,927	$0	$0	$0	$0	$0
1783 01	WS/Country Club Well #3	$555,785	$0	$0	$0	$0	$0
1806 01	WS/Ranchland Trail Area Water Mains	$0	$0	$0	$295,000	$0	$0
1816 01	WS/Alternative Water Supply Phase II	$800,000	$200,000	$2,500,000	$2,500,000	$0	$0
1931 01	WS/Markham Woods Rd WM Extension	$150,000	$0	$0	$0	$0	$0
1932 01	WS/Fire Flow Improvements	$100,000	$100,000	$100,000	$100,000	$100,000	$0
1935 01	WS/Heathrow Elementary Water Main Extension	$100,000	$0	$0	$0	$0	$0
1937 01	WS/Greenwood Blvd Water Main Upsizing	$0	$80,000	$320,000	$0	$0	$0
1938 01	WS/Lake Hayes WTM Connection	$0	$0	$0	$0	$350,000	$0
2004 01	WS Markham Regional WTP Aquifer Storage and Recovery System	$88,000	$0	$0	$0	$0	$0
2004 01	WS Markham Regional WTP Aquifer Storage and Recovery System	$100,000	$0	$0	$0	$0	$0
2128 01	WS/Country Club/Greenwood Lakes WTP Improvements	$0	$0	$0	$300,000	$0	$0
2141 01	WS/Markham Regional Water Treatment Plant	$565,000	$0	$0	$0	$0	$0
2143 01	WS/Southwest Service Area New Water Main	$0	$0	$0	$536,000	$0	$0
2144 01	WS/Southeast Regional to Lake Hayes Water Transmission Main Phase II	$0	$0	$0	$0	$384,000	$0
2146 01	WS/Winnebago-Wilshire Blvd Water Main Upgrade	$73,029	$0	$0	$0	$0	$0
2147 01	WS/Rising Sun Water Main Upgrade	$0	$0	$0	$0	$72,427	$0
2148 01	WS/Dodd Road Water Main Phase II	$0	$0	$0	$0	$225,913	$0
2149 01	WS/Grand Rd Upgrade Pipes	$0	$0	$0	$0	$141,609	$0

Seminole County Environmental Services

Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	2005	2006	2007	2008	2009
2165 01	WS/Elder Road/Orange Boulevard Pipe Replacement	$0	$0	$0	$0	$691,872	$0
2166 01	WS/Markham Water Treatment Plant Improvements Phase II	$3,000,000	$0	$0	$0	$0	$0
2167 01	WS/Markham Water Treatment Plant Forced Draft Aeration	$300,000	$0	$0	$0	$0	$0
2168 01	WS/ Elder Road New Water Main	$0	$0	$0	$217,000	$0	$0
2169 01	WS/Northwest Service Area South Loop Water Main	$0	$0	$0	$90,000	$0	$0
2174 01	WS/SR 46, Yankee Lake Road, Longwood Markham Road Utility Improvements	$0	$180,000	$720,000	$0	$0	$0
2177 01	WS/Orange Boulevard Replacement and Upgrade	$0	$0	$312,000	$1,247,200	$0	$0
W101	SR 46 NEW/UPGRADE Phase 1 Pipes	$0	$0	$0	$0	$20,743	$41,485
W020_B	Dodd Road NEW/UPGRADE Pipes Phase 1	$0	$0	$0	$0	$11,296	$22,591
W030	Rising Sun UPGRADE Pipes	$0	$0	$0	$0	$3,621	$7,243
W009	Lynnwood AC Pipe REPLACEMENT	$0	$0	$0	$0	$13,982	$27,964
W012	South Forest Lake NEW Pipe	$0	$0	$0	$0	$1,836	$3,673
W024	McCulloch Road UPGRADE Pipes	$0	$0	$0	$0	$0	$0
W121	Orange Boulevard UPGRADE Phase 2 Pipes	$0	$0	$0	$0	$0	$0
W117	North Carolina NEW Pipes	$0	$0	$0	$0	$0	$0
	Subtotal of Potable Water Work Plan Projects	$12,551,508	$1,460,000	$4,852,000	$6,185,200	$2,917,299	$102,956

Sewer Work Plan Projects

1005 02	WS/Sem Co./Sanford/Lk Mary Tri Party Reclaimed Water Project	$798,753	$0	$0	$0	$0	$0
1640 01	WS/NWRWWTF Reclaim System Improvement	$280,579	$0	$0	$0	$0	$0
1645 01	WS/Eastern Regional Reclaimed Water Distribution System	$5,725,800	$0	$0	$0	$0	$0
1646 01	WS/Seminole County/City of Oviedo Reclaimed	$1,100,000	$0	$0	$0	$0	$0
1782 01	WS/Markham Woods Road Reclaimed Water Main	$2,670,680	$0	$0	$0	$0	$0
1812 01	Northwest Regional WWTF Reclaim Discharge Main	$1,391,040	$0	$0	$0	$0	$0
1823 01	WS/Markham Woods Rd Reclaimed Water Main	$1,192,300	$0	$0	$0	$0	$0

Seminole County Environmental Services
Proposed Water Supply Projects For Work Plan - By Year

CIP No.	Project Title	2004	2005	2006	2007	2008	2009
1829 01	WS/GWL Reuse Ground Storage Tank	$1,312,727	$0	$0	$0	$0	$0
1953 01	WS/Reclaimed Water System Improvements	$1,500,000	$1,000,000	$0	$0	$0	$0
2009 01	WS AAA Drive Reclaim Water Main	$200,000	$0	$0	$0	$0	$0
2163 01	WS/GWL/NW Regional Ground Storage Tanks	$150,000	$0	$0	$0	$0	$0
2171 01	WS/Heathrow New Reclaim Main	$0	$0	$350,000	$1,375,000	$0	$0
2172 01	WS/Reclaim Retrofits Phase II	$0	$0	$3,800,000	$0	$0	$0
2173 01	WS/Reclaim Retrofits Phase I	$2,200,000	$2,400,000	$0	$0	$0	$0
2174 01	WS/SR 46, Yankee Lake Road, Longwood Markham Road Utility Improvements	$0	$180,000	$720,000	$0	$0	$0
2176 01	WS/Augmentation Wells Northwest Reclaim	$0	$350,000	$1,375,000	$0	$0	$0
2178 01	WS/Reclaimed Water Storage and Repump Facility	$0	$340,000	$1,360,000	$0	$0	$0
2184 01	WS/Alaqua Lakes Boulevard New Reuse Main	$0	$0	$89,000	$0	$0	$0
2230 01	WS/Reclaim Retrofit Phase III	$0	$0	$432,000	$1,728,000	$0	$0
2231 03	WS/Reclaim Retrofit Phase IV	$0	$0	$263,000	$1,052,000	$0	$0
2232 01	WS/Reclaim Retrofit Phase V	$0	$0	$0	$0	$1,503,000	$0
	Subtotal of Sewer Work Plan Projects	$18,521,879	$4,270,000	$8,389,000	$4,155,000	$1,503,000	$0
Alternative Water Supply Study Projects Not In Current CIP							
1	Alternative Water - Phase I, Brackish Water WTP	$188,050	$376,100	$564,150	$1,880,500	$7,898,100	$7,898,100
2	Alternative Water - Phase I, Brackish Water Well	$9,000	$18,000	$27,000	$90,000	$378,000	$378,000
3	Alternative Water - Phase I, Brackish Water Horiz Well	$15,000	$30,000	$45,000	$150,000	$630,000	$630,000
4	Alternative Water - Phase I, Brackish Water Stormwater	$10,000	$20,000	$30,000	$100,000	$420,000	$420,000
5	Alternative Water - Phase I, Brackish Water Infrastructure	$60,000	$120,000	$180,000	$600,000	$2,520,000	$2,520,000
	Subtotal of 2020 Alternative Water Supply Study Projects Not In Current CIP	$282,050	$564,100	$846,150	$2,820,500	$11,846,100	$11,846,100
	Total Proposed Water Supply Projects For Draft Work Plan (Current CIP, Master Plan Update & 2020 Alternative Water)	**$31,355,437**	**$6,294,100**	**$14,087,150**	**$13,160,700**	**$16,266,399**	**$11,949,056**

ATTACHMENT E

Proposed New Policy Amendments to Various Elements of the Comprehensive Plan

CAPITAL IMPROVEMENTS ELEMENT

Policy CIE 1.12 Inclusion of Water Supply Facilities Work Plan Projects
The County shall include in its annual update of the County's five (5) year capital improvements project listing the first five (5) years of the ten (10) year Water Supply Facilities Work Plan to ensure consistency between the Potable Water Element and the Capital Improvements Element.

CONSERVATION ELEMENT

Policy CON 1.17 Ten-Year Water Supply Facilities Work Plan
The County shall assess projected water needs and sources for at least a ten (10) year planning period by creating and maintaining a Water Supply Facilities Work Plan (Work Plan). The Work Plan shall be designed to maximize the efficient use of groundwater and, where possible and financially feasible, develop alternative water supply sources other than groundwater.

Policy CON 1.18 Consideration of the Regional Water Supply Plan
The County shall demonstrate full consideration of the most current St. Johns River Water Management District Regional Water Supply Plan when proposing and/or amending the ten-year Water Supply Facilities Work Plan.

INTERGOVERNMENTAL COORDINATION ELEMENT

Policy IGC 3.6 Coordination with the Regional Water Supply Plan
The County shall ensure coordination of the comprehensive plan with the most current St. Johns River Water Management District's Regional Water Supply Plan when proposing and/or amending the ten-year Water Supply Facilities Work Plan.

POTABLE WATER ELEMENT

OBJECTIVE POT 5 COORDINATION OF WATER AND LAND USE MANAGEMENT
The County shall coordinate the management of water sources and supply plans with the adopted land use management plan.

Policy POT 5.1 Ten Year Water Supply Facilities Work Plan
The County shall create and maintain a Water Supply Facilities Work Plan (Work Plan) for at least a ten (10) year planning period addressing water supply facilities necessary to serve existing and future development within the County's water service areas. The Water Plan will be created as a support document to the Potable Water Element.

Policy POT 5.3 Annual Review and Update of Work Plan
The County shall annually review and update as necessary the Water Supply Facilities Work Plan (Work Plan). Any changes to the first five (5) years of the Work Plan shall be included in the annual Capital Improvements Element update to ensure consistency between the Potable Water Element and the Capital Improvements Element.

Policy POT 5.2 Coordination with the Seminole County Water Master Plan
The County shall use the Work Plan in conjunction with the Water Master Plan to prioritize and coordinate the expansion and upgrade of facilities used to withdraw, transmit, treat, store and distribute potable water to meet future needs.

Policy POT 5.4 Coordination of Water and Land Use Planning
The County shall coordinate the Water Supply Facilities Work Plan with the adopted future land use map and the adopted socio-economic data projections of the Comprehensive Plan.

Policy POT 5.5 Coordination with Regional Water Supply Plan
The County shall consider and coordinate with the SJRWMD's most current Regional Water Supply Plan when updating the Work Plan.

Policy POT 5.6 Coordination with SJRWMD and Local Water Suppliers
The County shall seek to work in conjunction with the SJRWMD and other local governments on the development of efficient, cost-effective, and technically feasible water supply sources that will supplement future demands, without causing adverse impacts to water quality, wetlands, and aquatic systems.

Policy POT 5.7 Maximize Use of Facilities and Supply Sources
The County shall seek to maximize the use of existing potable water facilities, when financially and technically feasible, through the implementation of management techniques that can enhance a source of supply, sustain water resources and related natural systems, and/or optimize water supply yield.

Policy POT 5.8 Update of Work Plan with EAR
The County shall consider during preparation of each Evaluation and Appraisal Report (EAR) the SJRWMD's regional water supply plan and shall review and consider the need to revise the Work Plan.

ATTACHMENT F

Economic Impact Statement

Seminole County
ECONOMIC IMPACT STATEMENT

Date:	01/05/04	**Dept/Div:**	P&D/Planning Division
Contact:	Dick Boyer	**Phone Ext:**	407-665-7382
Action:	Adopt an ordinance amending the text of the Comprehensive Plan		
Topic:	Water Supply Facilities Work Plan		

Describe Project/Proposal

The purpose of this amendment is to comply with Year 2002 legislation to amend the local comprehensive plans to include a ten-year water supply plan as part of the Potable Water Element and make other amendments as required/needed. The goal is to ensure that long term planning for needed water supplies and facilities matches current planning activities and development approvals.

Describe the Direct Economic Impact of the Project/Proposal upon the Operation of the County

There is no direct economic impact as a result of this amendment beyond normal facility planning for future growth. These amendments simply extend the county's normal five year planning period for water facilities to a ten year period.

Describe the Direct Economic Impact of the Project/Proposal upon the Property Owners/Tax Payers/Citizens who are Expected to be Affected

There is no direct economic impact as a result of this amendment to the property owners/tax payers/citizens of this county beyond normal facility planning for future growth.

Identify Any Potential Indirect Economic Impacts, Positive or Negative, Which Might Occur as a Result of the Adoption of the Ordinance

The extended planning horizon and potential for coordination with local and regional water suppliers and users is expected to have a neutral-to-positive economic impact.

Citation

None.